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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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U.S. Philips Corporation  
580 White Plains Road  
Tarrytown, NY 10591

[REDACTED] EXAMINER

METZMAIER, DANIEL S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1712     |              |

DATE MAILED: 12/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/047,024             | WIELSTRA ET AL.     |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Daniel S. Metzmaier    | 1712                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 January 2002 and 26 March 2002.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-24 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

#### **DETAILED ACTION**

Claims 1-24 are pending. The Priority Papers filed April 29, 2002 have been entered as Paper No 4. The Preliminary amendment filed January 15, 2002 has been entered as Paper No. 5. The Information Disclosure Statement filed March 26, 2002 has been entered as Paper No. 6.

##### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in EP 01200191.3 on January 18, 2001. It is noted, however, that applicant has not filed a certified copy of the EP 01200191.3 application as required by 35 U.S.C. 119(b). It appears applicants filed a copy of said application on April 29, 2002, Paper No. 4, but at the time of examination no copy is present in the application.

##### ***Claim Objections***

2. Claims 19-24 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The starting material defined in claims 19-24 would have to be broader than the composition claims 2-7 since the compositions of claims 2-7 are obtainable from the compositions of 19-24. See also applicants' use of the term "obtainable" in defining the compositions of claim 1 addressed in the rejection under 35 USC 112, second paragraph, that follows.

##### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 claims a composition "obtainable by a method comprising . . . ". It is unclear what is the scope of applicants claim since the composition is not positively claimed and therefore it is unclear whether applicants are claiming said "obtainable composition in the alternative to all other lacquer compositions.

In claim 1, "the reaction mixture" lacks antecedent basis.

In claims 3 and 11, applicants employ the open language "comprises" when defining the alkoxide compound. It is unclear whether applicants intend to limit the alkoxide to metal diketonates or list it as a subgenus, reading on the remaining members of the genus. It is suggested applicants employ the language "wherein the metal alkoxide is a metal diketone" if that is applicants' intent.

In claim 6, it is unclear if or how the second organosilane differs from the organosilane of claim 1.

Claims 9-18 do not positively recite the method with the limitation "is used". It is unclear how said composition is used.

The remaining claims are included herein since they do not correct the issues addressed above.

***Double Patenting***

5. Claim 14 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 13. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitachi Chemical Co. Ltd, EP 0 768 352 A1 (hereafter Hitachi). Hitachi (examples)

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discloses compositions, methods and products as coating compositions comprising an organosilane and tetraalkoxysilane with the addition of a further metal alkoxide.

Hitachi (column 4, line 46 et seq) discloses the alkoxy silanes (b) that may be employed and the metal alkoxides (c) that may be employed including zirconium, aluminum and titanium alkoxides having acetylacetone derivatives (see instant claims 3 and 11). Hitachi (column 6, line 47) teaches the further incorporation of 3-glycidyloxypropyltrimethoxysilane (e).

Hitachi differs from the claims in the combination of an acid catalyst rather than the claimed basic conditions in claim 1, the silica particles and the use of an epoxysilane set forth in instant claims 4 and 5.

Hitachi (column 7, line 55, to column 8, line 7) teaches the compositions may be acid or base catalyzed. Hitachi (column 8, line 6) teaches ammonia as a suitable base. Hitachi (column 6, line 47) teaches the further incorporation of 3-glycidyloxypropyltrimethoxysilane (e).

Hitachi discloses the compositions as silica-based film forming compositions. The claims do not define the silica particles by size or concentration. The excess tetraalkoxysilane upon hydrolysis and condensation would have been expected to form at least minor amounts of silica particles, which are otherwise undefined in the claims. Attention is further directed to MPEP 2113.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ basic conditions to catalyst the compositions of Hitachi as taught therein as an obvious catalyst system contemplated in the Hitachi reference.

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It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the Hitachi component (e), 3-glycidyloxypropyltrimethoxysilane, to advantageously modify surface properties and/or improve adhesion.

9. Claims 1-2, 4-10, 12, 15-19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissan Chemical Ind, EP 0 611 812 A2 (hereafter Nissan). Nissan (examples and claims, particularly claim 1) discloses compositions, methods and products as coating compositions comprising an organosilane and tetraalkoxysilane with the addition of a further metal alkoxide. Nissan (page 4, lines 10-14) teaches the formation of silica particles having 10 to 80 nm particle size.

The excess tetraalkoxysilane upon hydrolysis and condensation would have been expected to form at least minor amounts of silica particles, which are otherwise undefined in the claims. Attention is further directed to MPEP 2113.

Nissan differs from the claims in the exemplified combination of the components.

Nissan (abstract and claim 1) sets forth coating compositions comprising tetraalkoxysilane, organosilane and titanium alkoxides formed under basic conditions. Nissan (page 4, lines 10-14) teaches the formation of silica particles in the coating compositions having 10 to 80 nm particle size. Nissan (page 3, lines 29) teaches 3-glycidyloxypropyltrimethoxysilane.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the titanium acetylacetoneate with the organosilanes under basic conditions as claimed in the Nissan reference resulting in the claimed coating compositions as disclosed in the Nissan reference.

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Furthermore, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ 3-glycidyloxypropyltrimethoxysilane as an obvious organosilane contemplated in the Nissan reference.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Sugama, US 5,200,237, reference is deemed to be substantially cumulative to the Hitachi reference. The coating set forth at column 4, line 35-36) is slightly alkaline. See also the rejections under 35 USC 112, second paragraph regarding the language "obtainable".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Daniel S. Metzmaier*  
DANIEL S. METZMAIER  
PRIMARY EXAMINER  
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